

## METHODS, DEVICES, AND USES FOR CALIXARENES

## ABSTRACT

A method of identifying, detecting and/or chemically using NO<sub>x</sub> compounds is provided, wherein calixarene complexes are exposed to a nitrogen-oxide gas containing samples and form calixarene-nitrosonium complexes that are readily identified and detectable. Importantly, the process of forming one or more calixarene-nitrosonium (NO<sup>+</sup>)  
5 complexes is reversible. The calixarene-nitrosonium complexes dissociate upon decoloration enabling the parent calixarenes to be recovered.